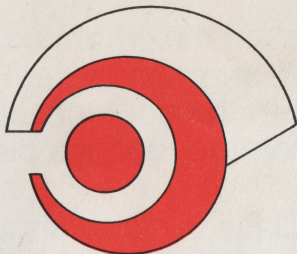


INTERGALACTIC TACHYON DRIVE SPACECRAFT



**12,288 ASTRO
MEGA CLASS
INTERMEDIATE-RANGE**

Operator Manual



ASTRO DEVELOPMENT, INC.

*Contains important operating and safety instructions.
Keep with spacecraft at all times.*

This operator manual contains important information regarding operation of the Intergalactic star fleet Astro Mega Class series of intermediate-range spacecraft.

In order to obtain maximum usage of this spacecraft, we suggest all craft pilots familiarize themselves with the contents of this booklet and follow the recommendations outlined.

Astro Mega Class vehicles should be operated only by a trained, licensed pilot. This book is *not* meant to be used as space flight instruction.

The Astro Mega Class meets or exceeds all applicable Intergalactic Federation star fleet safety standards. Effectiveness of these safety features can best be continued through regular craft inspection and maintenance. Proper repair of this craft should be done only by a qualified Astro Development technician. Always specify Astro Development parts for maximum performance and economy.

**Observe all flight regulations.
Make safety a habit!**



ASTRO DEVELOPMENT, INC.

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CONTENTS

Main Computer	4
Bridge Controls	4
Primary Components	5
Cargo Bay	9
Payloads	9
Emergency Landing	9
Specifications	11

MAIN COMPUTER

Using advanced technology, the Astro Mega Class craft is virtually self-operational. The on-board computer system provides all engine control, navigational maneuvers, and systems monitoring necessary for intermediate-range space travel.

The Main Computer is entirely voice-activated. The system receives audio input only at the Main Computer Console, located behind the bridge on the port side. However, the system provides audio output anywhere on-board.

COMPUTER OPERATION—When the vehicle is in total shut-down, the computer must be re-activated for flight. Audio input of the MISSION CODE is required to begin computer functions. Audio input of the word "STATUS" initiates a computer check of all on-board systems. Audio output will notify the pilot of malfunctions, safety hazards, or any other disorder that would imperile space travel. Intergalactic Federation safety codes require that **all systems MUST be in proper operating condition in order for this craft to enter flight.** Audio output will notify the pilot of lift-off condition with the ALL SYSTEMS CHECK response.


The Main Computer performs other functions besides standard ship operation. For example, with audio input of the word "VALUE," it will appraise any item and supply currency exchange rates for nearby star systems.

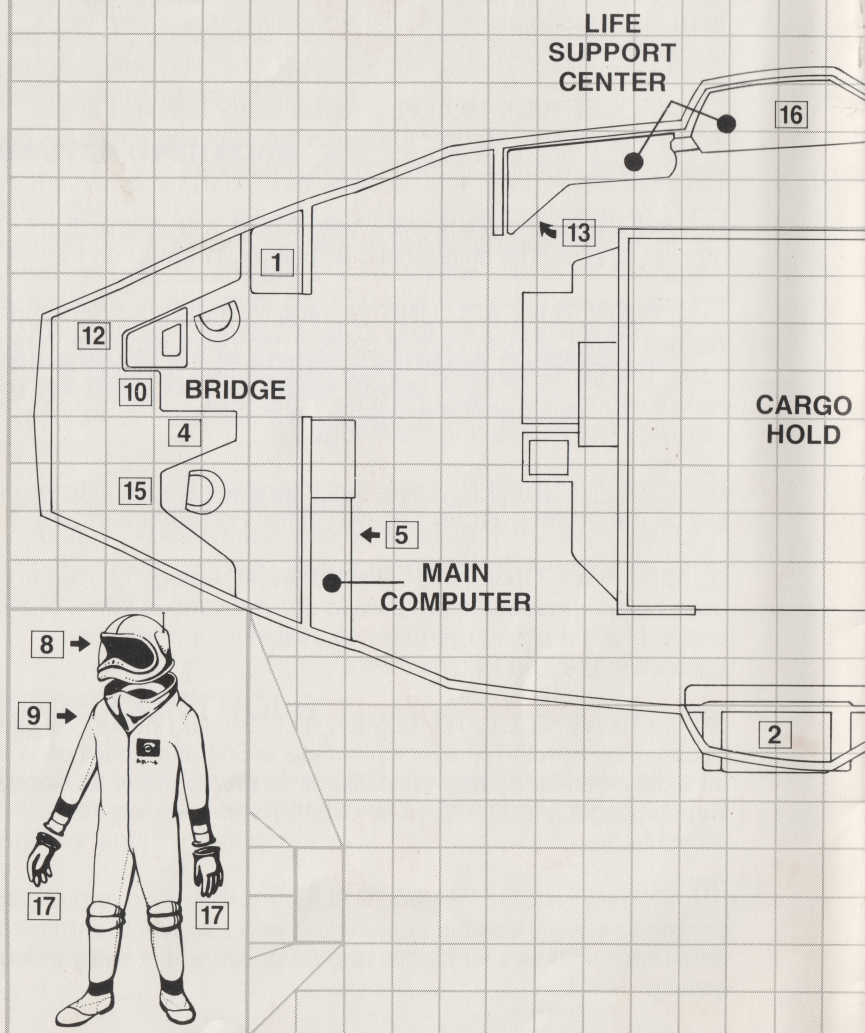
BRIDGE CONTROLS

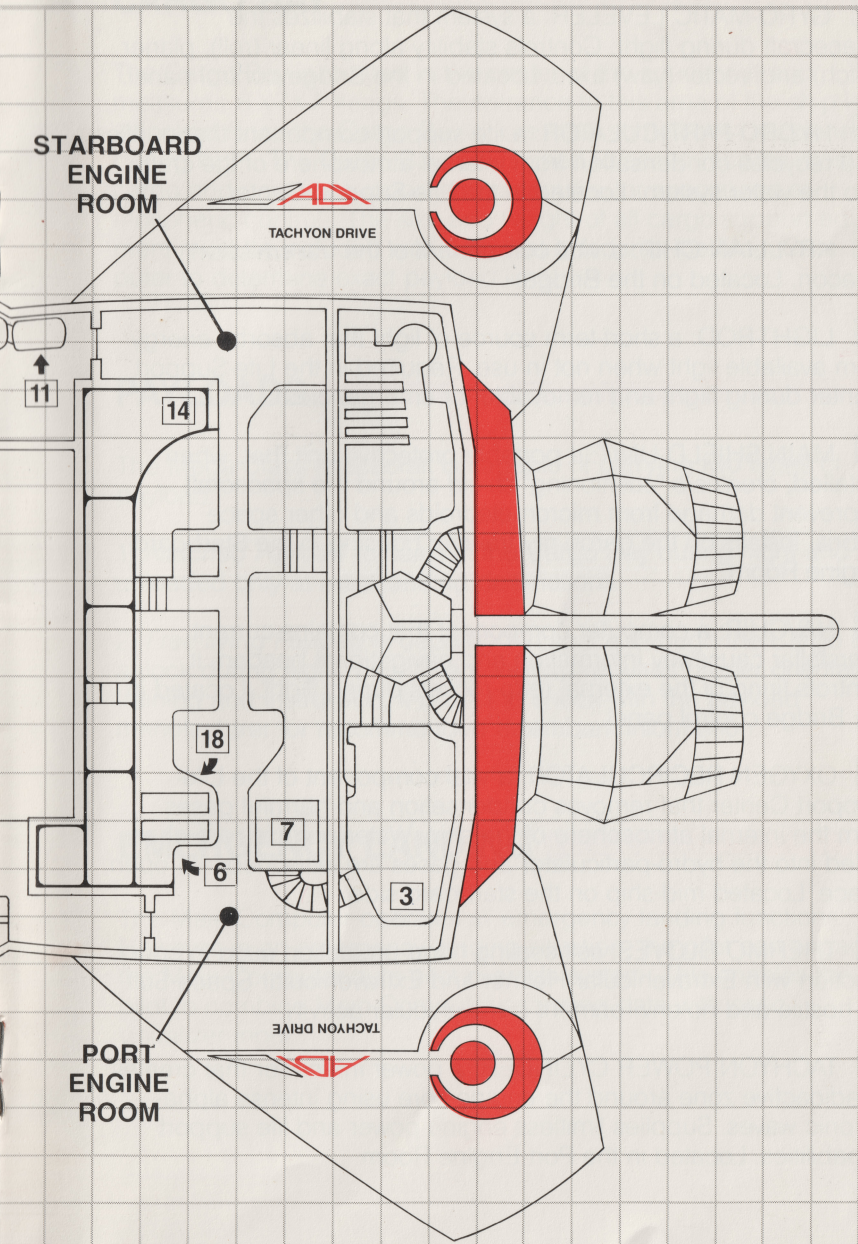
Bridge controls are automatically activated and monitored by the Main Computer. Override Systems will function only during an emergency landing situation.

PRIMARY COMPONENTS

- [1] **ACCELEROMETER:** an instrument that measures the rate of acceleration changes. Located on the Bridge control panel by the co-pilot chair.
- [2] **AIRLOCK:** a chamber that adjusts air pressure for passage from on-board to extravehicular environment and vice versa. Located mid-ship on the port side.
- [3] **APOGEE KICK MOTOR:** a rocket motor that fires at the apogee of an oval transfer to launch the craft into a circular geostationary orbit. Located in the Port Engine Room.
- [4] **AVIONICS:** the electronics system and instruments that monitor and control ship functions in flight. Located on the bridge.
- [5] **COMPUTER CARD UNIT:** storage for individual Universal Activan Data Cards to control various computer information functions. The cards can easily be exchanged and updated to the most recent information banks. Located in the Main Computer on the port side before entering the Bridge.
- [6] **CRYON PURIFIER:** a filter that intensifies cryon particles emitted by the power cylinder. Located in the Port Engine Room.
- [7] **ENERGY CONVERTER:** an "Xchanger" energy converter that uses zellium-based internal coils to convert various forms of energy created by the power cylinder into usable light drive energy. Located in the Port Engine Room.
- [8] **EXTRAVEHICULAR HELMET:** a self-sealing headgear used in conjunction with Extravehicular Space Suit and Thermo Gloves for extravehicular activity in hostile or no-environment situations. Contains light activated face shield and portable oxygen recirculator.
- [9] **EXTRAVEHICULAR SPACE SUIT:** a self-sealing and regulating thermo-spacesuit used in conjunction with Extravehicular Helmet and Thermo Gloves for hostile and no-environment extravehicular activity.

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- [10] GYRO-MATIC LEVELER: a system that stabilizes the spacecraft during flight. Controls stability along linear (roll), planer (pitch) and vector (yaw) axes. Located in the Bridge control panel.
- [11] HYDRO-PARTICULATOR: a life-support component that purifies and recycles condensation from internal atmosphere of the craft into the water system. Located in the Life-Support Center.
- [12] KRYLLIAN CHIP: a vital component of the transmission beacon. Located on the Bridge.
- [13] LIGHT-ROD: a short-term source of light that absorbs energy from available light when not in use. Required in the Life-Support Center during flight and removable for emergencies.
- [14] MAIN SHIELD UNIT: a portable protective unit that, when installed, creates a "cushioning" shield around the spacecraft to prevent damage from micrometeoroids and other space debris. Installs on the garon ray transfer housing in the Starboard Engine Room.
- [15] NAVCHIP: a computer component that contains current interstellar causeway information and navigational beacon. It controls firing of the external retro-rockets during flight. Located in the Bridge control panel
- [16] OXYGEN RECIRCULATOR: a vital component of the Life-Support Center that removes condensation and harmful gases from the internal atmosphere of the ship. Water particles are channeled into the hydro-particulator and gases are jettisoned into open space. Located mid-ship on the starboard side.
- [17] THERMO GLOVES: self-sealing hand protection used in conjunction with Extravehicular Helmet and Extravehicular Space Suit for hostile and no-environment extravehicular activity.
- [18] TACHYON POWER CYLINDER: a power intensifier that creates a radioactive zone around the engine core using intense alpha-coronic waves. Supplies limitless engine power and life support capabilities. Located in the Port Engine Room.

CARGO BAY

The Cargo Bay is located in the center of the spacecraft and measures 8 X 7 X 7 fleegs. The entrance to this area of the ship is airlocked since the Cargo Bay doors must sometimes be opened during flight. The Cargo Bay is designed to accommodate most cargo and payload support equipment (i.e. for specialized atmospheric control). The size and weight of all cargo support equipment must be included with data that is fed into the Main Computer to determine exact payload limit.

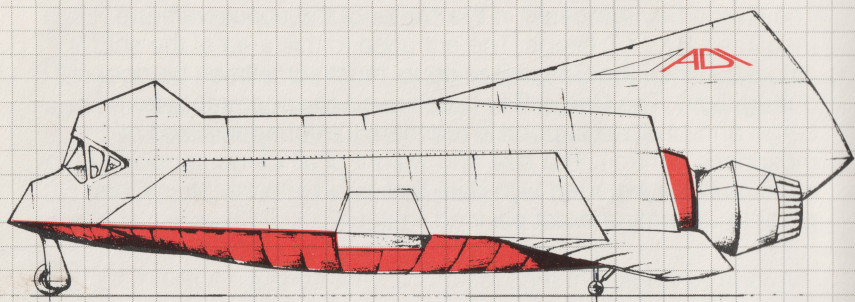
PAYLOADS

The Mega Class spacecraft is capable of carrying two types of payload:

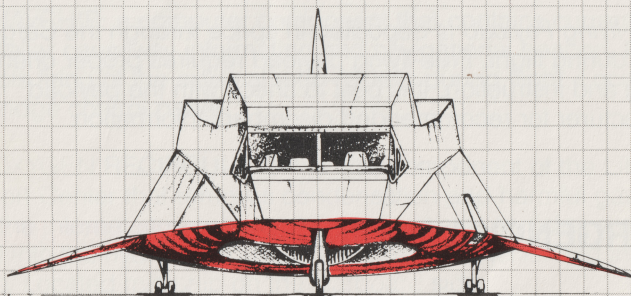
- 1) *Attached Payload* remains in the Cargo Bay during flight and unloaded only at fixed landing destinations.
- 2) *Free-flying Payload* is deposited in space through the Cargo Bay airlock during flight. Free-flying payload requires proper orientation training and instruction. It is best to check with the payload manufacturer for recommended disembark information.

EMERGENCY LANDING

The Main Computer operates all emergency landing functions. However, in an emergency landing situation, the pilot can engage the Main Computer auto-pilot override system. This enables the pilot to combine Main Computer scanning data with optic visualizer input.



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SPECIFICATIONS

Ship type: Mega Class Tachyon Drive

Model 12,288

Identification Code: XX4357G900S5.1

Weight (fueled): 75,000 BS (165,000 LM)

Cargo Capacity: 1,000,000 BS (2,200,000 LM)

Wingspan: 25.73 FG (84.42 T)

Length: 35 FG (114.83 T)

External Hull Composition: Ablative Nuvonic Trainium

Inner Hull Composition: Spanedar Voraxion

Engine Type: Tachyon-convert 5000

Engine Thrust: 14,900,000 KN

Maximum Speed: 4.5 LPM

Fuel Capacity: 400,000 Lemperes*

*NOTE: Use ONLY uncarbonized fuel.

Limited 5 Year/50 Billion Mile Warranty

This product, except Xchanger energy converter and Kryllion chip, is warranted by Astro Development, Inc. to the original purchaser to be free from defects in materials and workmanship under normal space flight conditions for a period of 5 years or 50 billion miles, whichever comes first. Astro Development, Inc. will repair and or replace with the same or similar model at our option the 12,288 Astro Mega Class intermediate-range spacecraft without charge for parts or labor. This warranty will not apply to this craft if it has been misused, abused or modified. Without limiting the foregoing, leakage of fuel on ablative hull, dented or bent metal parts, crash landings, or unpiloted flight. Defects must be reported within 24 hours to:

Astro Development, Inc.
Quality Control Center
Cavbox Complex
Proxima Delphina
Alpha Sector 7,33421

To order a Tachyon Drive Spacecraft Diagnosis and Repair Manual, send *42,000 plus return postage to:

Cosmic Media
Cavbox Complex
Proxima Delphina
Alpha Sector 7,33429

Be sure to include your spacecraft identification number, name and address. Don't forget your sector name. (Prices subject to change without notice. Delivery in 4 to 6 hemits).